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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY-DOCKET NO.	CONFIRMATION NO.
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09/628,848

07/31/2000

Grant E. Moulton

M-8415 US

5513

7590

06/03/2004

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EXAMINER

DUVERNE, JEAN F

ART UNIT

PAPER NUMBER

2839

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/628,848

Applicant(s)

MOULTON ET AL.

Examiner

Jean F. Duverne

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 08 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-21 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6, 8, 9, 22, 23, 27, 29-32, 38 and 39 is/are rejected.
- 7) ☐ Claim(s) 3-5, 24-26, 28, and 33-37 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 6, 22-23, 27, 31-32, and 38 are rejected under 35 U.S.C. 102(e) as being anticipated by Bliss' (US006132104A).

Bliss' device discloses an optical device comprising a printed circuit board assembly (see abstract), a plurality of optical components such as laser pump card, optical fiber amplifier, printed board or plate (12), plurality of electrical component such as semiconductor chip components, a heat sink (20, 20') for dissipating heat, attached or interfaced directly to the electrical and optical components (see col. 5) used in data signal transmission, a wheel (26) used as a tray mounted to the circuit board at 13 for routing the optical fiber; circuit and the heat sink comprising opening for embedded the end connection of the optical and electrical components during connection, the use of wall made with stainless steel which is a heat compliant component material. The optical card and optical fiber communication are known to be used in high speed data transmission. Nonetheless, the term "high speed data transmission" as recited only in the claim preamble does add any patentable weight to the claim limitations.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 8-9, 29-30, 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bliss (US006132104A).

Bliss' device discloses the aforementioned limitations, but fails to explicitly disclose the exact location for different components on the printed circuit board. It would have been obvious to one having ordinary skill in art at the time the invention was made to place different component in different locations, since it has been held that rearranging of pad of an invention involves only routine skill in the art. In re Japike, 86 USPQ 70. It would have been obvious to one having ordinary skill in art at the time the invention was made to place different components in different locations for improving the system interconnection by placing at suitable location to avoid over-heating.

Response to argument

Applicant's arguments filed with the amendment on 3/10/2004 have been fully considered but they are not persuasive. The claims do not define structural structure features that distinguish over prior art. For example, Bliss' device discloses an optical device comprising a printed circuit board assembly (see abstract), a plurality of optical

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components such as laser pump card, optical fiber amplifier, printed board or plate (12) holding a plurality of circuitry, plurality of electrical components such as semiconductor chip components, a heat sink (20, 20') for dissipating heat, attached or interfaced directly to the electrical and optical components (see col. 5) used in data signal transmission, a wheel (26) used as a tray mounted to the circuit board at 13 for routing the optical fiber; the edge of the heat sink (19') with the optical connector coupling at 54 connected to the circuit components. For the optical and electrical connection of the heat sink (see figs. 1 with the frame 19' connected the wall 52 and 13 having the diode (30) with are electrical components sand the optical coupling at 54. Furthermore, in response to applicant's argument that there is no motivation to combine or modify the references, the examiner recognizes that references cannot be arbitrarily combined and that there must be some reasons why one skilled in the art would be motivated to make the proposed combination of primary and second references. In re Nomiya, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken as a whole would suggest to one skilled in the art. In re McLaughlin, 170 USPQ 209 (CCPA 1971). References are evaluated by what they suggest to one versed in the art rather than by their specific disclosure. In re Bozek, 163 USPQ 545 (CCPA) 1969.

Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

Allowable Subject Matter

Claims 10-21 are allowable. Prior art fails to disclose the combination features the printed circuit board and the heat sink with opening to embed optical and electrical

Claims 10-21 are allowable. Prior art fails to disclose the combination features components with the rest of the claims limitations.

Claims 3-5, 7, 24-26, 28, 33-37 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims (see above for allowable subject matter).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean F. Duverne whose telephone number is (571) 272-2091. The examiner can normally be reached on 9:00-7:30, Monday-Thursday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on (571) 272-2092. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action may be mailed to:

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

For additional information regarding this new address, which was effective May 1, 2003, see *Correspondence with the United States Patent and Trademark Office*, 68 Fed. Reg. 14332 (March 25, 2003).

Or Faxed to:

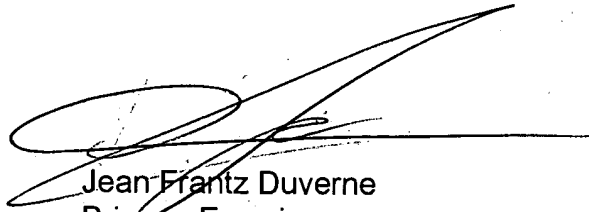
(703) 872-9306.

Hand-delivered responses should be brought to:

**Crystal Plaza 4, Fourth Floor (Receptionist)
2201 South Clark Place, Arlington, Virginia.**

JFD

05/24/2004



Jean Frantz Duverne
Primary Examiner
Art Unit 2839